DOCUMENT RESUME

ED 123 510 CG 010 541

AUTHOR Lingle, John H.; And Others
TITLE Cognitive Processes in Person Perception.
PUB DATE Sep 75
NOTE 12p.; Paper presented at the Annual Meeting of the American Psychological Association (83rd, Chicago, Illinois, August 30-September 2, 1975); for related document, see CG 010 540

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Cognitive Processes; *Information Processing; Interpersonal Relationship; Models; *Perception; *Performance Factors; Personality; *Research Projects; Social Psychology; Speeches; Task Performance
IDENTIFIERS *Person Perception

ABSTRACT

Two experiments are reported examining the influence of the relationship between judgemental sets on the processing and integration of information in a person perception task. Experiment I showed that subjects made an occupational judgement about another more quickly when the judgement was similar rather than dissimilar to a previous occupational judgement. Experiment II found that subjects processed trait information in such a way as to make decision relevant information more accessible in memory. Conceptual and methodological implications of the two studies are discussed for future investigation of the cognitive processes involved in interpersonal judgements. (Author)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED123510

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Cognitive Processes in Person Perception

American Psychological Association Convention, September, 1975

John H. Lingle, Nehemia Geva and Thomas M. Ostrom

The Ohio State University

Abstract. Two experiments are reported examining the influence of the relationship between judgmental sets on the processing and integration of information in a person perception task. Experiment I showed that subjects made an occupational judgment about another more quickly when the judgment was similar rather than dissimilar to a previous occupational judgment. Experiment II found that subjects processed trait information in such a way as to make decision relevant information more accessible in memory. Conceptual and methodological implications of the two studies are discussed for future investigation of the cognitive processes involved in interpersonal judgments.

Recent research in impression formation has been dominated by the study of evaluative rating scale judgments (e.g. Anderson, 1962; 1973; 1974). Although the study of rating scale judgments has the advantage of quantitative precision, it is uninformative about the cognitive representations individuals form about other people and the specific cognitive processes used to store, remember and integrate such representations in making a specific evaluative judgment. Work in the area of implicit personality structure by Rosenberg and others (e.g., Rosenberg & Sadlak, 1972) has shed some light on the structure of trait inferences, but again provides minimal information about which inferences will be generated and integrated in producing a coherent judgment about another individual. For example, any cognitive representation

CG 010 541

is unlikely to be solely dependent on simple stimulus information. The particular judgment required in considering a set of personality traits is likely to be an important determinant of how information is remembered and processed. Furthermore, the relationship between an impending judgment and previous judgmental experience most likely also affects the integrative processes.

The present paper reports two experiments which examined the influence of the relationship between judgmental sets on the processing and integration of information in a person perception task. The first experiment explored the effects of an initial decision on the speed with which a subsequent judgment was made, while the second experiment investigated the manner in which an initial judgmental set affected the way in which stimulus information was later remembered.

Experiment I

If an impending judgment is important in determining how a person will interpret, integrate and remember specific information about another individual, it would be expected that a second similar decision about the same person would be facilitated by the first decision. On the other hand, when a second judgment is dissimilar to an initial judgment, the initial decision should not facilitate the second since the original information will have to be reinterpreted and reintegrated. If this is the case, differences in the integrative processes for similar and dissimilar subsequent judgments should be reflected in differential decision times. Thus, the first experiment tested the hypothesis that subjects would take less time to make a judgment about a person when a second judgment was similar rather than dissimilar to an original judgment.

Method

Procedure

Twelve introductory psychology students served as subjects in partial fulfillment of a course requirement. Upon arriving, each subject was seated in a desk chair beside a slide projector. A toggle switch was mounted on the arm of the chair which could be moved to the right (labeled "good") or to the left (labeled "bad"). As part of a study on job counseling, subjects were asked to role play a job placement counselor and make a series of decisions concerning the suitability of hypothetical individuals for different occupations. It was explained that at the beginning of each trial an initial occupation would be projected followed by a slide containing four traits describing a stimulus person. The subject was to consider the suitability of the person for the job previously shown. Following the traits, the initial occupation was again presented and the subject was to indicate his decision by moving the toggle switch to the "good" or "bad" position. Next, a second occupation was shown and the subject was asked to judge the suitability of the same stimulus person for this second profession. Finally, a blank slide was presented to indicate the end of the trial and the process was repeated with a new set of traits and occupations until each subject had made two occupational judgments each for twelve different stimulus persons. Subjects were given two practice series in order to assure that they understood the procedure correctly.

Design and Stimulus Materials

Twelve groups of four occupations were generated. Each group contained two pairs of similar occupations each of which were dissimilar from the

occupations of the other pair (e.g., store clerk/salesman--lawyer/judge). Three independent judges demonstrated 100% agreement in judging each pair of similar occupations to be more similar than any possible dissimilar pair of occupations within the same occupational group (according to the criterion that "the occupations would require individuals with similar characteristics"). Each group of four occupations was paired with four randomly selected descriptive traits chosen from Edwards (1967) rescaling of Anderson's (1968) trait adjective list.

The design was counterbalanced so that all occupations appeared a comparable number of times as the initial occupational judgment, the dissimilar second judgment and the similar second judgment. Decision time was automatically measured and recorded by a Hewlett-Packard 12.5 MHz electronic counter from the moment the slide was projected displaying the stimulus occupation of the point at which subjects activated the toggle switch to register their decision.

Results

Average decision times for each subject's similar and dissimilar second occupational judgments were obtained. As predicted decision time for similar second occupational judgments was significantly shorter than for dissimilar judgments (5.24 secs. *vs* 6.26 secs.; $t_{dep} = 2.78$, d.f. = 11, $p < .02$). (See Table 1.) Ten of the twelve subjects spent less average time in making similar as opposed to dissimilar second judgments ($p < .04$ by the sign test). Two additional internal analyses indicated that, 1) the difference in similar and dissimilar decision time was consistent regardless of whether an occupation tended to receive positive, negative or mixed judgments when it

served as the initial judgment stimulus and 2) the difference did not result from subjects tending to make faster decisions whenever their second response was identical to their first (e.g., good-good or bad-bad).

Experiment II

If people are aware of an impending judgment which they will be required to make, such a cognitive set could be expected to affect the way in which initial information is processed and remembered. Experiment II was designed to determine if an initial judgmental set would affect the manner in which people subsequently remember stimulus information. Specifically, it was hypothesized that subjects would be more likely to remember descriptive traits which were relevant to an initial decision about some other person than traits which were irrelevant to the decision.

Method

Procedure

Sixty-four introductory psychology students served as subjects in partial fulfillment of a course requirement. Stimuli were presented in booklet form. Each booklet consisted of four, eight-trait descriptions of stimulus persons which subjects viewed for sixty seconds each in combination with one of four occupation titles. On separate pages subjects were then required to 1) evaluate how well they thought the stimulus person would perform in the target occupation, 2) express their confidence in this evaluation and 3) recall as many of the specific traits describing that person as possible. Each subject completed these questions for four separate stimulus persons, two being judged for one occupation (either "academician" or "sportsman" and two for a second occupation (either "pilot" or "comedian").

Design and Stimulus Materials

Lists of traits were generated so that lists A and B contained four traits selected to relate to performance as an "academician" and four that related to performance as a "sportsman." Lists C and D contained four traits relating to a person's performance as a "pilot" and four traits relating to "comedian." Traits were selected by having five subjects generate adjectives judged to be relevant to one occupation within a pair but not to the other. These traits were subsequently rated by seven independent judges and those traits were chosen which received the highest ratings according to the above mentioned criteria.

The experimental design was a 2 x 2 x 2 partially counterbalanced factorial design. 2 x 2 (relevances by occupational replication) between subjects analyses of variance were conducted for the first two persons judged and for the second two persons judged. To hold stimulus trait differences constant, one occupation in each pair was arbitrarily selected as "relevant," and relevance was regarded as a between subject variable. The dependent measure was the proportion of relevant stimulus traits correctly recalled by each subject in comparison to the total number of correctly recalled traits from a particular list pair.

Results

As can be seen in Figure 1, when the two different occupational lists appeared in the first two orders the predicted main effect was highly significant ($F = 13.88$, $df = 1,56$, $p < .001$). (See Figures 1 and 2.) Subjects had a higher percentage of correctly recalled traits when the traits were relevant as opposed to irrelevant to the judgment dimension. Figure 1

also shows the relevancy main effect held for both occupational replications (F for interaction <1.0).

The main effect of trait relevancy dissipated for judgments made third and fourth in the sequence (F <1.0), although the means were still in the predicted direction. This appeared to result from subjects' increasing tendency to focus on correctly recalling the trait lists once they became aware that they would be required to subsequently reproduce the individual traits. This motivational reorientation was reflected both by subjects' reports during debriefing and by the fact that there was a significant increase in the total number of correctly recalled traits between list positions 1-2 and 3-4 (11.00 vs. 11.64; $t_{dep} = 1.96$, df = 62, p <.05).

In this study subjects were also asked the question: "what other traits do you think this person is likely to have." Analyses showed that the "implicational associates" which subjects generated were judged to be more closely associated with the "relevant" as opposed to the "irrelevant" occupational judgment by a group of independent judges. This held only for the first two judgments in the sequence and not for the last two (see Figures 3 and 4).

Conclusions

The results of these two studies afford strong evidence that the integrative processes involved in person perception are contingent upon impending decisional dimensions as well as the relationship between past and present judgments. It would appear that people integrate information about other individuals in a functional manner which affects both the ease of subsequent decisions as well as the manner in which initial information

is stored and remembered. In Experiment I subjects were able to make an occupational judgment more quickly when it was similar rather than dissimilar to an initial judgment. Experiment II demonstrated that subjects processed information in such a way as to make initially relevant information more accessible in memory which would presumedly affect subsequent impressions and judgments.

Social psychologists have been derelict in conceptualizing and studying some of the most important influences involved in the person perception process. Initial stimulus information and implicit personality structures certainly influence information integration. However, relationships among the types of judgments which are formed about a specific person appear to be equally important in understanding the person perception processes. Issues of paramount importance for future study include 1) investigating the determinants of the cognitive representations which people utilize in formulating and storing impressions of others and 2) the specific cognitive processes by which people sample and integrate these cognitive representations (be they traits or trait inferences) in forming a decision along a particular judgmental dimension.

Finally, the present studies serve to demonstrate that there exists a broad range of experimental paradigms available for understanding person perception processes. In comparison to social psychologists, experimental psychologists have used a much broader range of dependent measures in attempting to understand the nuances of information processing, including reaction time (e.g., Pachella, 1974), recall errors (e.g., Dawes, 1964) and stimulus interference or masking (e.g., Sperling, 1963; 1967). It would appear both feasible and desirable for social psychologists to utilize many of these same measures in attempting to understand the complex processes by which social judgments are made.

References

Anderson, N. H. Application of an additive model to impression formation. Science, 1962, 138, 817-818.

Anderson, N. H. Likableness ratings of 555 personality trait words. Journal of Personality and Social Psychology, 1968, 9, 272-279.

Anderson, N. H. Functional measurement of social desirability. Sociometry, 1973, 36, 89-98.

Anderson, N. H. Cognitive algebra: Integration theory applied to social attribution. In L. Berkowitz (Ed.), Advances in experimental social psychology. Vol. 7. New York: Academic Press, 1974.

Dawes, R. M. Cognitive distortion. Psychological Reports, 1964, 14, 443-459.

Edwards, J. D. Revised likableness ratings of 554 personality-trait adjectives. Ohio State University, Mimeo, 1967.

Pachella, R. G. The interpretation of reaction time in information processing research. In B. H. Kantowitz (Ed.), Human information processing: Tutorials in performance and cognition. New Jersey: Lawrence Erlbaum Associates, 1974.

Rosenberg, S. and Sedlak, A. Structural representations of implicit personality theory. In L. Berkowitz (Ed.), Advances in experimental social psychology. Vol. 6. New York: Academic Press, 1972.

Sperling, G. A. A model for visual memory tasks. Human Factors, 1963, 5, 19-31.

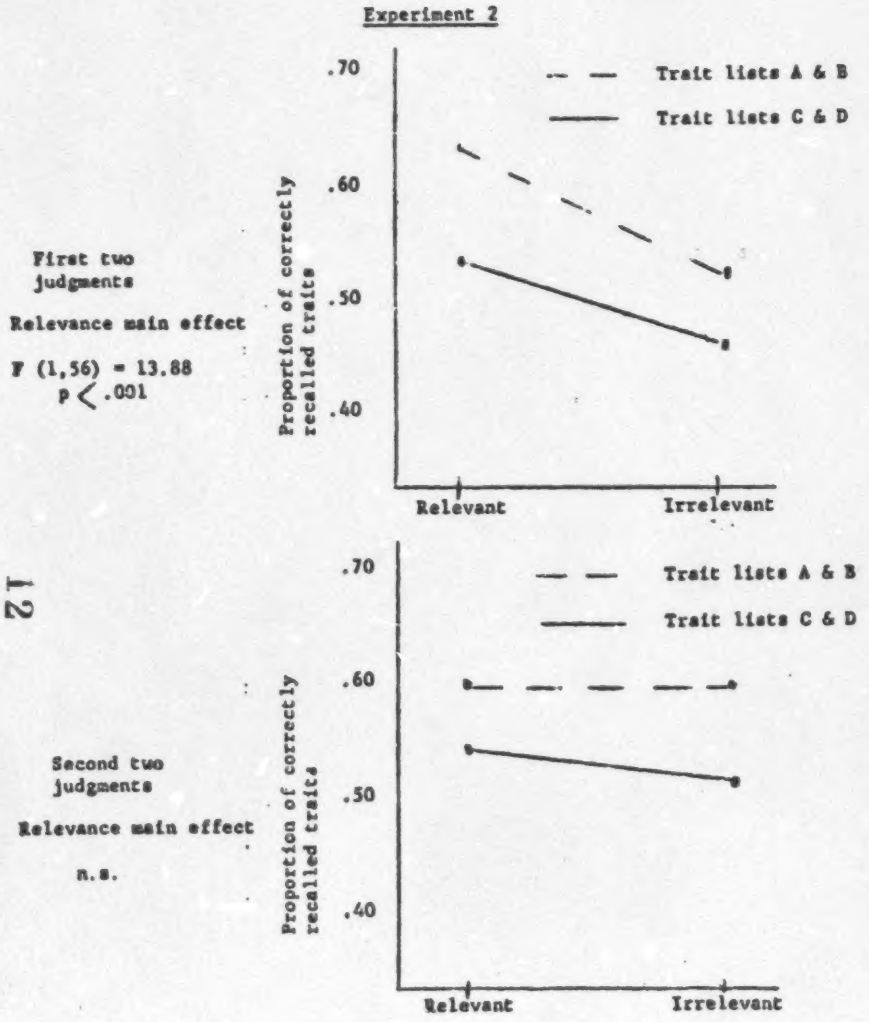
Sperling, G. A. Successive approximations to a model for short-term memory. In A. F. Sanders (Ed.), Attention and performance. Amsterdam: North-Holland Publishing Co., 1967.

Table 1

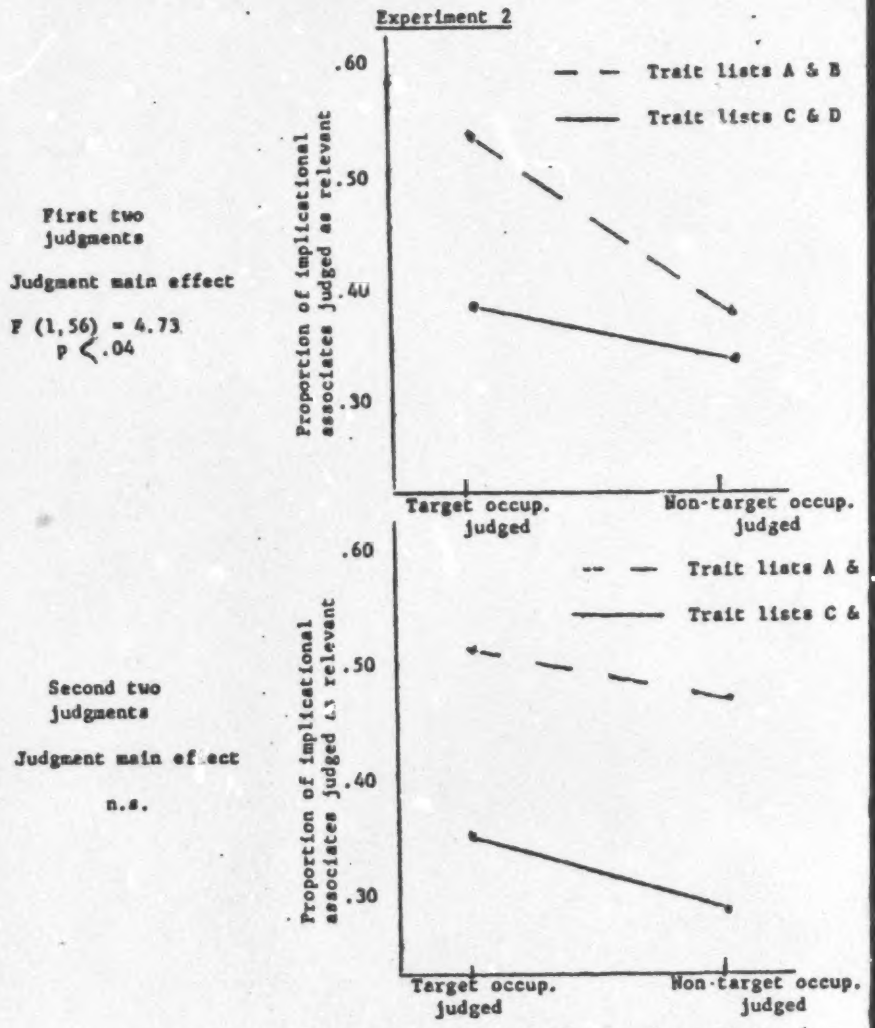
Decision Time as a Function of Whether or not a Second Occupational Judgment was Similar or Dissimilar to an Initial Judgment

Similar	Dissimilar
5.24 secs	6.26 secs

t_{dep} (11) = 2.78, p <.02.



Figures 1 & 2: Mean proportion of target traits correctly recalled (out of total correct recall) as a function of whether or not the target traits were relevant or irrelevant to the occupational judgment made.



Figures 3 & 4: Mean proportion of implicational associates (out of total generated associates) judged to be more closely associated with performance in the tarket occupation as a function of the occupational judgment made.